

CLAIMS

1. A microencapsulation system, characterized in that  
it is developed from oily substances and from  
5 sugars, and forms an essentially organized  
assembly corresponding to stacks of crystalline  
structures.
2. The system as claimed in claim 1, characterized in  
10 that it exhibits an organization in the form of  
hexagonal- or pseudo-hexagonal-type crystalline  
structures.
3. The system as claimed in claim 1 or 2,  
15 characterized in that the sugars are  
polysaccharides and/or oligosaccharides, and/or  
starches, and/or derivatives thereof.
4. The system as claimed in claim 3, characterized in  
20 that the oligosaccharides are cyclodextrins.
5. The system as claimed in claim 4, characterized in  
that the cyclodextrin is  $\alpha$ -cyclodextrin.
- 25 6. The system as claimed in any one of the preceding  
claims, characterized in that the oily substances  
are fatty acids, monoglycerides, diglycerides or  
triglycerides.
- 30 7. The system as claimed in claim 6, characterized in  
that the oily substances are plant oils, such as  
soya oil, wheatgerm oil, avocado oil or sweet  
almond oil, animal oils, such as onager oil, or  
synthetic oils or mineral oils.
- 35 8. The system as claimed in any one of the preceding  
claims, characterized in that said oily substances  
are in the dispersed state and/or in the form of

inclusion complexes, for example with cyclodextrins, and in particular  $\alpha$ -cyclodextrin.

- 5 9. The system as claimed in any one of the preceding claims, characterized in that it contains, in addition, one or more substances of interest.
- 10 10. The system as claimed in claim 9, characterized in that the substances of interest are water-soluble substances or liposoluble substances.
- 15 11. The system as claimed in claim 10, characterized in that said substance(s) is (are) therapeutically active, in particular at low dose.
12. The system as claimed in claim 10, characterized in that said substance(s) can be used in the cosmetics field.
- 20 13. The system as claimed in any one of the preceding claims, characterized in that it is provided in the form of solid beads with a dense structure.
- 25 14. The system as claimed in claim 13, characterized by a particle size of one micron to several centimeters, in particular of 0.1 to 8 mm, or else of 0.1 to 5 mm, in particular of 0.5 to 3 mm.
- 30 15. The system as claimed in any one of claims 1 to 14, characterized in that it is provided in the form of compact phases.
- 35 16. The system as claimed in any one of the preceding claims, characterized in that it is provided in the form of beads in suspension, or of dried or lyophilized beads, which may or may not be redispersed in an aqueous or nonaqueous liquid or in a gel.

17. A method for preparing the system as claimed in any one of the preceding claims, characterized in that it comprises the steps:

5           - consisting of addition of oily substances to an aqueous solution or suspension of sugar capable of interacting with said oily substances by forming essentially organized systems corresponding to stacks of crystalline structures, in particular  
10           hexagonal- or pseudo-hexagonal-type structures;

          - consisting of moderate agitation of the medium, at a temperature of 15 to 40°C, preferably of 18 to 37°C, more particularly of 20 to 30°C,  
15           especially of 20 to 25°C, and consisting of recovery of the systems formed.

18. The method as claimed in claim 17, characterized in that the agitation is carried out under  
20           conditions of speed and of duration that make it possible to obtain solid beads with a dense structure, or a compact or fluid phase.